

DUAL DAMASCENE PROCESS

ABSTRACT

A dual damascene process is disclosed. According to the dual
5 damascene process of the present invention, a first recessed region
through an intermetal dielectric layer is filled with a bottom protecting
layer, and the bottom protecting layer and the intermetal dielectric layer
are simultaneously etched to form a second recessed region that has a
shallower depth and wider width than the first recessed region on the
10 first recessed region by using an etch gas selectively etches the
intermetal dielectric layer with respect to the bottom protecting layer. In
other words, the etch selectivity ratio, the intermetal dielectric layer with
respect to the bottom protecting layer, is preferably about 0.5 to about
1.5. Thus, it is possible to form a dual damascene structure without the
15 formation of a byproduct or an oxide fence.